

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	3	("4380771"   "6074036"   "6179412").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/07/31 09:40
L3	2	("6520617").URPN.	USPAT	OR	ON	2007/07/31 09:47
L4	3	10/749816	USPAT	OR	ON	2007/07/31 09:52
L5	12	("3747120"   "4613875"   "5604521"   "5912689"   "5992974"   "6041600"   "6132028"   "6235212"   "6264307"   "6439695"   "6536874"   "6582059").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/07/31 09:47
L6	2	"7121646".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/31 09:52
L7	1	2005-511485.NRAN.	DERWENT	OR	ON	2007/07/31 09:52
S1	8	("6582059" "6536874" "6439695" "6264307" "6235212" "6041600" "4613875" "3747120").pn.	USPAT	OR	ON	2005/06/27 07:18
S2	316	((nozzle planar) with (substrate plate layer)) same ((channel guide groove direct) with (clean maintenance))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:45
S3	1420	347/22,33,36,4047.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:44
S4	5	S2 and S3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:44
S5	9921	((nozzle planar) with (substrate plate layer)) same ((ink liquid fluid) near8 (channel guide groove direct))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:50
S6	152	S3 and S5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:46
S7	31688	(nozzle with (substrate plate layer)) same (geometr\$2 shape recess channel groove)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:51
S8	188	S3 and S7	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:51
S9	328952	(ink fluid liquid) with (spray contaminat\$3 excess\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:52

## EAST Search History

S10	117	S8 and S9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:54
S11	3522	347/47,54,56,71.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:54
S12	1179	S7 and S11	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 07:55
S13	175	S9 and S12	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 08:12
S14	510	((nozzle orifice) with (geometr\$2 shape recess)) same capillary	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 08:14
S15	17	S11 and S14	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 08:14
S16	6	("3466659"   "3774231"   "3887928"   "3958249"   "4349830").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/06/27 09:15
S17	12	("4413268").URPN.	USPAT	OR	ON	2005/06/27 09:15
S18	6	("4059480"   "4066491"   "4276335"   "4403234"   "4413268"   "4549188").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/06/27 09:18
S19	34	("4728392").URPN.	USPAT	OR	ON	2005/06/27 10:37
S20	1454	347/100,106.ccls.	USPAT	OR	ON	2005/06/27 10:39
S21	652	(viscosity same tension) and S20	USPAT	OR	ON	2005/06/27 10:39
S22	4	("50" adj dynes) and ("40" adj centipoise)	USPAT	OR	ON	2005/06/27 10:38
S23	578	(viscosity with tension) and S20	USPAT	OR	ON	2005/06/27 10:39
S24	302	347/106.ccls.	USPAT	OR	ON	2005/06/27 10:39
S25	66	(viscosity same tension) and S24	USPAT	OR	ON	2005/06/27 10:44
S26	514	(depth height) with ((nozzle orifice) same (geometr\$2 dimension))	USPAT	OR	ON	2005/06/27 10:45
S27	3522	347/47,54,56,71.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 10:45
S28	15	S27 and S26	USPAT	OR	ON	2005/06/27 10:45
S29	514	(depth height) with ((nozzle orifice) same (geometr\$2 dimension))	USPAT	OR	ON	2005/06/27 11:49
S30	3522	347/47,54,56,71.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/27 11:49
S31	15	S30 and S29	USPAT	OR	ON	2005/06/27 11:49
S32	302	347/106.ccls.	USPAT	OR	ON	2005/06/27 12:19
S33	66	(viscosity same tension) and S32	USPAT	OR	ON	2005/06/27 12:19

## EAST Search History

S34	23	S33 and piezoelectric	USPAT	OR	ON	2005/06/27 12:19
S35	3	((("4,358,781") or ("4,459,601") or ("5,757,391"))).PN.	USPAT	OR	OFF	2006/03/03 10:22
S36	0	("58283946132028").PN.	USPAT	OR	OFF	2006/03/03 10:23
S37	2	((("5828394") or ("6132028"))).PN.	USPAT	OR	OFF	2006/03/03 10:23
S38	4	("4413268"   "5487483"   "5595785"   "5786832").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 10:25
S39	149	(capillary with (channel groove conduit)) same (nozzle near4 plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:33
S40	900	347/22	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:26
S41	1827	347/47	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:32
S42	551	347/45	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:26
S43	18	S39 and S40	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:32
S44	2	("3776461"   "5381169").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 10:27
S45	15	S39 and S41	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:28
S46	10	("4542389"   "4550326"   "4578687"   "4646110"   "4914562"   "4914736"   "4980703"   "4994825"   "5198834"   "5374948").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 10:29
S47	4	S39 and S42	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:32
S48	10319	(channel groove conduit) same (nozzle near4 plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:33
S49	5707	(channel groove conduit) with (nozzle near4 plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:35

## EAST Search History

S50	300	S41 and S48	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:34
S51	233	S41 and S49	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:34
S52	2573	(channel groove conduit) with (nozzle adj plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:35
S53	65241	"347"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:35
S54	1185	S52 and S53	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:35
S55	2	(channel groove conduit) with (maintenance) with (nozzle adj plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:36
S56	2	((channel groove conduit) with maintenance) with (nozzle adj plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:36
S57	4	((channel groove conduit) with maintenance) same(nozzle adj plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:38
S58	104	((channel groove conduit) with capillary) same(nozzle adj plate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:38
S59	82	S53 and S58	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 10:38
S60	1446	347/47.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 11:03
S61	636	347/47.ccls.	USPAT	OR	ON	2006/03/03 11:04
S62	554	S61 not silverbrook.in.	USPAT	OR	ON	2006/03/03 12:31
S63	636	347/47.ccls.	USPAT	OR	ON	2006/03/03 12:31
S64	184	(S63 not silverbrook.in.) and (nozzle with shape)	USPAT	OR	ON	2006/03/03 12:32

## EAST Search History

S65	9	("3167489"   "3329588"   "3461045"   "3607674"   "3704175").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 12:36
S66	4	("4290857").URPN.	USPAT	OR	ON	2006/03/03 12:36
S67	6	("4255237"   "4290857"   "4417946"   "4422905"   "4513298"   "4558333").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 12:38
S68	31	("4716423").URPN.	USPAT	OR	ON	2006/03/03 12:39
S69	11	("4368476"   "4694308"   "4716423"   "4723129"   "4740796"   "5262802"   "5300959"   "5443687"   "5697144"   "6402304"   "6523938").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 12:40
S70	2	("4513298"   "4558333").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 12:43
S71	27	("4694308").URPN.	USPAT	OR	ON	2006/03/03 12:43
S72	12	("4413268").URPN.	USPAT	OR	ON	2006/03/03 12:51
S73	6	("3466659"   "3774231"   "3887928"   "3958249"   "4349830").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 13:15
S74	937	347/44	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 13:16
S75	551	347/45	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 13:15
S76	1827	347/47	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 13:15
S77	104	S74 and S75 and S76	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/03 13:16
S78	937	347/44	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:16
S79	551	347/45	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:16
S80	1827	347/47	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:16
S81	104	S78 and S79 and S80	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:19
S82	497	347/45.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:37
S83	6865	((nozzle oriface) near3 (plate substrate layer)) with (conduit channel recess groove)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:38

## EAST Search History

S84	65241	"347"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:38
S85	2406	S83 and S84	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:38
S86	2988	((nozzle oriface) adj (plate substrate layer)) with (conduit channel recess groove)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:41
S87	1324	S84 and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:39
S88	352	((nozzle oriface) adj (plate substrate layer)) with (conduit channel recess groove)) same (shape geometry)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:41
S89	146	S84 and S88	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 13:41
S90	24	(US-20030081069-\$ or US-20050140747-\$ or US-20040141031-\$ or US-20040145621-\$).did. or (US-4550326-\$ or US-6132028-\$ or US-4413268-\$ or US-5790151-\$ or US-4962391-\$ or US-5940096-\$ or US-4290857-\$ or US-4716423-\$ or US-4422082-\$ or US-6305792-\$ or US-6039438-\$ or US-5853861-\$ or US-6536879-\$ or US-4021252-\$ or US-6527369-\$ or US-6685301-\$ or US-4786288-\$ or US-4728392-\$).did. or (JP-02004515-\$ or JP-61287756-\$).did.	US-PGPUB; USPAT; JPO	OR	ON	2006/03/03 13:54
S91	481	347/67	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:14
S92	15625	nozzle adj plate	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:14
S93	127	S91 and S92	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:14
S94	514	(nozzle adj plate) with specifc\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:19
S95	256	S84 and S94	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:15

## EAST Search History

S96	215	(nozzle adj plate) same ((surround\$3 encompass\$3) with (channel groove moat recess))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:20
S97	261	((nozzle oriface) adj (substrate plate)) same ((surround\$3 encompass\$3) with (channel groove moat recess))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/03 14:21
S98	18	(US-20040141031-\$ or US-20050140747-\$ or US-20040145621-\$).did. or (US-6305792-\$ or US-5940096-\$ or US-4422082-\$ or US-6039438-\$ or US-5853861-\$ or US-4786288-\$ or US-4716423-\$ or US-4550326-\$ or US-4413268-\$ or US-4728392-\$ or US-6132028-\$ or US-4962391-\$ or US-4021252-\$ or US-6527369-\$).did. or (JP-02004515-\$).did.	US-PGPUB; USPAT; JPO	OR	ON	2006/03/06 07:58
S99	3	"4422082".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 07:54
S10 0	1	1982-F7677E.NRAN.	DERWENT	OR	ON	2006/03/06 07:55
S10 1	5146	347/22-35,47.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:53
S10 2	44	((nozzle oriface) adj (plate substrate)) same ((channel recess trough) with (wick\$3 with (liquid ink fluid)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:56
S10 3	14	S101 and S102	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:55
S10 4	3647	((nozzle oriface) adj (plate substrate)) same (channel recess trough)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:57
S10 5	269	S101 and S104	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:57
S10 6	2174	((nozzle oriface) adj (plate substrate)) with (channel recess trough)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:19
S10 7	147	S101 and S106	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:57
S10 8	63	S107 and (capillary wick\$3 vacuum)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 08:58

## EAST Search History

S109	11	("4157935"   "4246076"   "4312009"   "4317124"   "4450455"   "4502054"   "4587534"   "4593296"   "4640382"   "4644126"   "4694548").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/06 09:00
S110	34	("5189437").URPN.	USPAT	OR	ON	2006/03/06 09:02
S111	56	(vacuum and wick\$3) near3 (channel recess groove)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:05
S112	65241	"347"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:04
S113	65241	S112 and S112	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:04
S114	6	S111 and S112	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:04
S115	6	(vacuum same wick\$3) with ((channel recess groove) same (maintenance clean\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:05
S116	4	S112 and S115	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:06
S117	718	347/30.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:06
S118	160	347/31.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:07
S119	373	347/32.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:07
S120	3	\20 and S118 and S119	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:07
S121	3	S117 and S118 and S119	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:07

## EAST Search History

S12 2	3	("5055856"   "5867187"   "5898444").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/06 10:16
S12 3	1	S122 and ((vacuum suction) and wlp\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/06 10:17
S12 4	5	("3787148"   "4363609"   "5260724"   "5309180"   "5517219").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/06 10:18
S12 5	1172	((nozzle oriface) adj (plate substrate)) with (silicon)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:21
S12 6	768	S112 and S125	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:19
S12 7	1446	347/47.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:20
S12 8	87	S125 and S127	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:20
S12 9	194	((nozzle oriface) adj (plate substrate)) with (silicon)) same (advantage benefit improvement superior)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:22
S13 0	14	S127 and S129	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:22
S13 1	2	"20010024219"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/11 15:36
S13 2	20	(US-20010024219-\$ or US-20040141031-\$ or US-20050140747-\$ or US-20040145621-\$).did. or (US-4962391-\$ or US-6258286-\$ or US-6171875-\$ or US-6132028-\$ or US-4728392-\$ or US-4550326-\$ or US-4413268-\$ or US-5189437-\$ or US-5853861-\$ or US-4786288-\$ or US-4021252-\$ or US-6039438-\$ or US-4422082-\$ or US-5898444-\$ or US-6273546-\$).did. or (JP-02004515-\$).did.	US-PGPUB; USPAT; JPO	OR	ON	2007/03/08 11:03
S13 3	2	S132 and (porous sponge)	US-PGPUB; USPAT; JPO	OR	ON	2007/03/08 11:03
S13 4	6	(vacuum same wick\$3) with ((channel recess groove) same (maintenance clean\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/03/08 12:40
S13 5	4245	347/47,54,56,71.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/03/08 12:41

# EAST Search History

S13 6	135	("20010001452"   "20010001455"   "20010001456"   "20010001460"   "20010001474"   "3150442"   "3538744"   "3586933"   "3611071"   "3663194"   "3669881"   "3725186"   "3738759"   "3770405"   "3915652"   "3921961"   "3940301"   "4007464"   "4056324"   "4092166"   "4209696"   "4356722"   "4366118"   "4369664"   "4403234"   "4437103"   "4459267"   "4480259"   "4489259"   "4490728"   "4590482"   "4593728"   "4683042"   "4708782"   "4728392"   "4733823"   "4842701"   "4879097"   "4891120"   "4908112"   "4983038"   "4999493"   "5015845"   "5110745"   "5126022"   "5132012"   "5162650"   "5180480"   "5182366"   "5245185"   "5269900"   "5283036"   "5294426"   "5296114"   "5296375"   "5302533"   "5304487"   "5306621"   "5316680"   "5328578"   "5331159"   "5332481"   "5334310"   "5338427"   "5349186"   "5374834"   "5376252"   "5387329"   "5401376"   "5401963"   "5415841"   "5421980"   "5423964"   "5427946"   "5429734"   "5431807"   "5445324"   "5453185"   "5481110"   "5486335"   "5493115"   "5495108"   "5498392"   "5501883"   "5501893"   "5505832"   "5512131"   "5512451"   "5523566"   "5536939"   "5541408"   "5563639"   "5572023"   "5608217"   "5640010"   "5641400"   "5644131"   "5647979"   "5652427"   "5705813"   "5716825"   "5747815"   "5750988"   "5779868"   "5789746"   "5800692"   "5804022"   "5856082"   "5872010"   "5876957"   "5877495"   "5917184"   "5917185"   "5969351"   "5969353"   "5972187"   "5993633"   "5994696"   "6005245"   "6007775"   "6032876"   "6060705"   "6066848").PN. OR ("6068749"   "6110343"   "6114693"   "6171875"   "6245227"   "6394942"   "6417510"   "6454938"   "6563111"   "6569324").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/08 12:42
S13 7	584	(depth height) with ((nozzle orifice) same (geometr\$2 dimension))	USPAT	OR	ON	2007/03/08 13:10
S13 8	17	S135 and S137	USPAT	OR	ON	2007/03/08 13:10
S13 9	15	("3747120"   "4413268"   "4613875"   "5745129"   "6041600"   "6132028"   "6139136"   "6235212"   "6254219"   "6264307"   "6439695"   "6511156"   "6536874"   "6582059"   "6957882").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/08 13:10
S14 0	1594	347/47.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 11:45
S14 1	1594	347/47.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 12:48
S14 2	4693	347/40-45.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 12:48
S14 3	72	((john with batterton) (andreas with bibl) (paul with hoisington) (steven with barss)) and spectra.as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 12:52
S14 4	72	((john with batterton) (andreas with bibl) (paul with hoisington) (steven with barss)). in. and spectra.as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 12:59
S14 5	0	(nozzle inlet outlet substrate radial surface below plane channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:01
S14 6	72124	"347"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:01

## EAST Search History

S14 7	0	(nozzle inlet outlet substrate radial surface plane channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:01
S14 8	4	(nozzle inlet outlet substrate radial surface channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:03
S14 9	5	(nozzle inlet outlet substrate radial channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:03
S15 0	1	S149 not S148	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:03
S15 1	26	(nozzle substrate radial channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:06
S15 2	21	S151 not S149	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:03
S15 3	26	((nozzle or oriface) substrate radial channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:07
S15 4	0	S153 not S151	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:07
S15 5	1184	((nozzle or oriface) radial channel).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:07
S15 6	20	S146 and S155	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/07/30 13:09
S15 7	1594	347/47.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 13:25
S15 8	69	(geoffrey with mruk).xa.	USPAT	OR	ON	2007/07/30 13:25
S15 9	28	S158 and electrode.clm.	USPAT	OR	ON	2007/07/30 13:26